## PATENT ABSTRACTS OF JAPAN

(11)Publication number:

03-200118

(43) Date of publication of application: 02.09.1991

(51)Int.CI.

G02F 1/1337

G09F 9/35

(21)Application number: 01-340861

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(22)Date of filing:

28.12.1989

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## (54) LIQUID CRYSTAL CELL

## (57) Abstract:

PURPOSE: To obtain the liquid crystal cell having intra-surface orientation polymerized thin-film layers which are smooth over the entire part of the films and have excellent liquid crystal orientability as the oriented films for liquid crystals by adopting the structure in which the polymerized films having intra-surface orientability are directly formed on an inorg. substrate and realizing the intra-surface oriented films with condensation polymerized and polyaddition polymerized material having high heat resistance and high insulation resistance.



CONSTITUTION: This liquid crystal cell has a pair of the electrodes formed on the inside surface of the substrate including the transparent electrode B 1 formed on the inside surface of the transparent substrate A 1 and a pair of the insulating films formed on the inside surfaces of the electrodes

including the transparent insulating film C 1 formed on the inside surface of the transparent electrode B 1. The cell has also the base part having intra-surface anisotropy on the surface formed on at least one inside surface of a pair of the insulating films and the liquid crystal oriented films D 1 consisting of the polyaddition polymerized films or condensation polymer films exclusive of ring opening polymers directly formed on the intra-surface anisotropic parts of the base parts. Further, the cell has the liquid crystal layer E 1 sealed into the space formed between the liquid crystal oriented film D 1 and the insulating film or between the liquid crystal oriented films D 1. The excellent liquid crystal orientability is obtd. in this way and the unequal colors are hardly generated in the liquid crystal cell.

In addition, local structural defects are hardly generated.

## **LEGAL STATUS**

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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